



New Product

SS3H9 and SS3H10

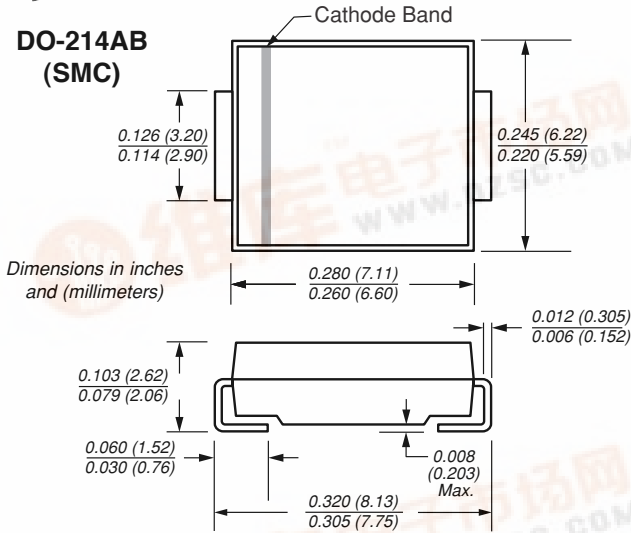
Vishay Semiconductors
formerly General Semiconductor



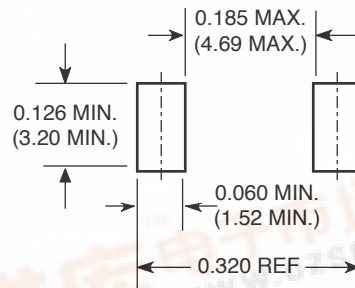
High Voltage Surface Mount Schottky Barrier Rectifiers

Reverse Voltage 90 to 100V
Forward Current 3.0A

DO-214AB (SMC)



Mounting Pad Layout



Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low profile surface mount package
- Built-in strain relief
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

Mechanical Data

Case: JEDEC DO-214AB molded plastic body

Terminals: Solder plated, solderable per MIL-STD750, Method 2026

Polarity: Color band denotes cathode end

Weight: 0.007 oz., 0.25 g

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	SS3H9	SS3H10	Unit
Device marking code		MS9	MS10	
Maximum repetitive peak reverse voltage	V _{RRM}	90	100	V
Working peak reverse voltage	V _{RWM}	90	100	V
Maximum DC blocking voltage	V _{DC}	90	100	V
Maximum average forward rectified current at: T _L = 115°C	I _{F(AV)}	3.0		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	100		A
Peak repetitive reverse surge current at t _p = 2.0µs, 1KHz	I _{RRM}	1.0		A
Critical rate of rise of reverse voltage	dv/dt	10,000		V/µs
Typical thermal resistance – junction to lead T _L = 25°C – junction to ambient ⁽²⁾	R _{θJL} R _{θJA}	9.7 32		°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175		°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Maximum instantaneous forward voltage at: ⁽¹⁾	I _F = 3.0A, T _J = 25°C I _F = 3.0A, T _J = 125°C	V _F	0.8 0.65	V
Maximum DC reverse current at rated DC blocking voltage	T _J = 25°C T _J = 125°C	I _R	20 4	µA mA

Notes: (1) Pulse test: 300µs pulse width, 1% duty cycle
(2) PCB mounted

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Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

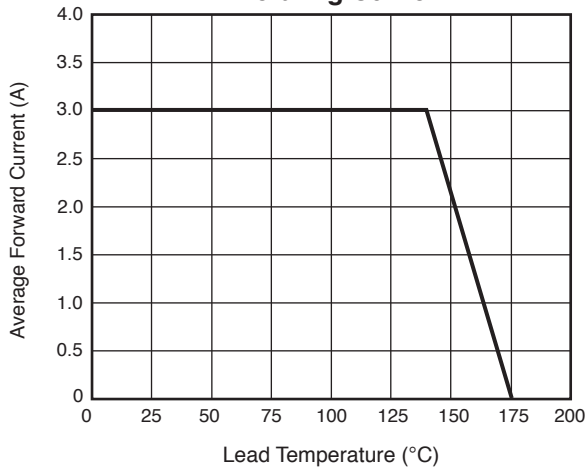


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

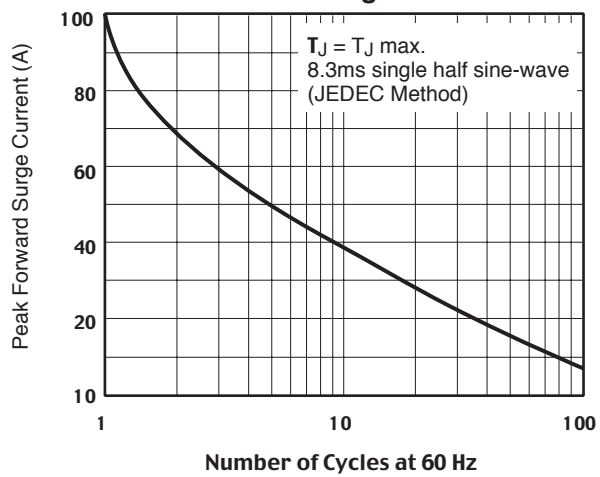


Fig. 3 – Typical Instantaneous Forward Characteristics

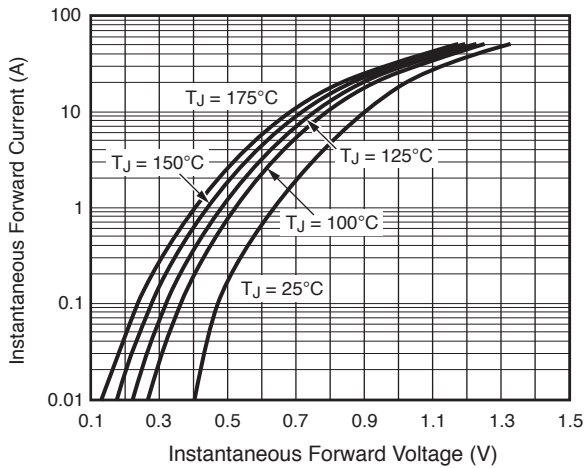


Fig. 4 – Typical Reverse Characteristics

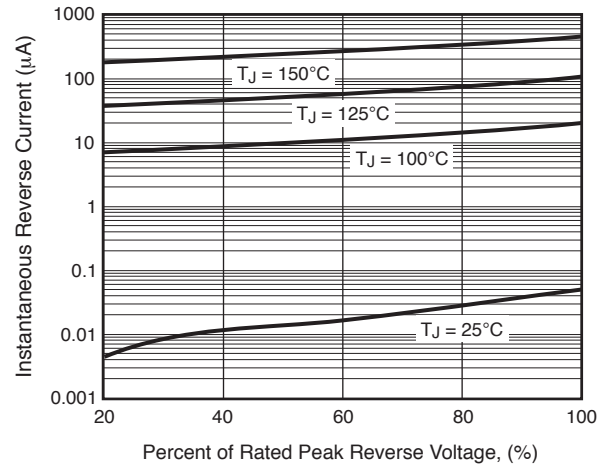


Fig. 5 – Typical Junction Capacitance

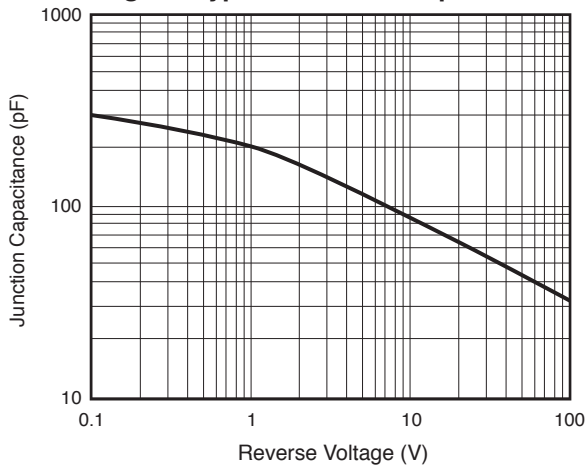


Fig. 6 – Typical Transient Thermal Impedance

